

Flagstaff Meadows Wastewater Treatment Plant

Aquifer Protection Permit #104083

Place ID #10501, LTF #70035

SIGNIFICANT AMENDMENT

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an amendment to the Aquifer Protection Permit (APP) for the subject facility that covers the life of the facility, including operational, closure, and post closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. This document gives pertinent information concerning the issuance of the permit. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards at the Point of Compliance (POC); and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). The purpose of BADCT is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology); to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer; or to prevent pollutants from reaching the aquifer.

I. FACILITY INFORMATION

Name and Location

Name of Permittee:	Utility Source, LLC
Mailing Address:	20525 E Chandler Heights Rd Queen Creek, Arizona 85142
Facility Name and Location:	Flagstaff Meadows Wastewater Treatment Plant Brannigan Park Road Bellmont, Arizona, 86015 Coconino County

Regulatory Status

This Significant amendment application was received on February 14, 2018. An Aquifer Protection Permit (APP) was issued for this facility on September 13, 2001. A Significant permit amendment was issued on March 5, 2005.

The latest inspection report (No. #214194) dated April 24, 2014 indicates that the facility was found to be in compliance with the APP and Arizona rules and statutes.

Facility Description

This permit authorizes the Utility Source, LLC, to operate the Flagstaff Meadows Wastewater Treatment Plant (WWTP), and expansion of the existing plant. The existing facility has the

capacity to collect and treat up to 0.10 million gallons per day (mgd), the modification will increase the treatment capacity to of the WWTP to 0.165 mgd.

Existing Facility

The existing 0.1 mgd WWTP consists of an influent lift station, a headworks with bar screens, an equalization basin, one anoxic tank, two aeration tanks and a de-nitrification tank for nitrification-denitrification, secondary clarifier, a sand filter, a chlorine disinfection contact tank, de-chlorination, a sludge holding tank, and an effluent pump station. The effluent generated may be discharged to an unnamed tributary to the Volunteer Wash as regulated by AZPDES permit AZ0024708 or reuse under a valid Recycled Water Permit.

Upgraded Facility

The Upgraded WWTP shall be authorized to treat up to 0.165 mgd. The WWTP will consist of an influent lift station with two (2) new pumps, a new headwork with a static screen, an equalization basin, two anoxic tanks (one new and one converted from the existing sludge holding tank), two (2) parallel aeration trains (each of which include two aeration tanks in a series), an reaeration tank, two (2) secondary clarifiers, a standby chemical feed, a sand filter with new media, a turbidimeter, a new UV disinfection unit, two (2) effluent tanks, an effluent pump station and the old abandoned Sequencing Batch Reactor tank will be converted into the sludge holding tank.

The effluent may be discharged to an unnamed tributary to the Volunteer Wash as regulated by AZPDES permit AZ0024708 or reused under a valid Recycled Water Permit. Sludge will be stored in the sludge holding tank prior to being hauled off-site for management and disposal in accordance with state and federal regulations.

All industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

Amendment Description

The amendment provides for the following changes:

- increase the design flow from 0.1 mgd to 0.165 mgd
- the rehabilitation of the existing treatment units including the influent pump station, the equalization basin, the aeration tanks, and filtration
- addition of the new treatment units including the static screen, the anoxic tank, the clarifier, standby chemical feed, a sand filter with new media, a turbidimeter, and the UV disinfection unit

BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY

The WWTP was designed, constructed, and shall be operated, and maintained to meet the treatment performance criteria for new facilities as specified in A.A.C. R18-9-B204. The facility

shall meet the performance requirement for industrial pre-treatment as per A.A.C. R18-9-B204(A)(6)(b)(iii).

All Industrial hookups and other non-residential hookups to the treatment system shall be authorized according to the applicable federal, state or local regulations.

III.COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS

Monitoring and Reporting Requirements

To ensure that site operations do not violate Aquifer Water Quality Standards at the point of compliance, representative samples of the effluent shall be collected at the effluent pump station. The permittee shall monitor the effluent daily for fecal coliform, monthly for total nitrogen, quarterly for metals, and annually for VOCs (see Section 4.2, Tables IA and IA-1 in the permit). Effluent flows will be measured downstream of the filters.

The WWTP is rated as producing reclaimed water meeting Class A+ Reclaimed Water Quality Standards (A.A.C. R18-11, Article 3) and may be used for any allowable Class A, B or C use under a valid reclaimed water permit (A.A.C. R18-9, Article 7). To ensure that site operations do not violate the Reclaimed Water Quality Standards for the beneficial use of Class A+ reclaimed water, the permittee shall monitor the reclaimed water at the same effluent sampling point as indicated above and as per Section 4.2, Table IA-1 only. The permittee shall monitor the reclaimed water daily for fecal coliform and monthly for total nitrogen (see Section 4.2, Table IB in the permit).

Facility inspections and operational monitoring shall be performed on a routine basis (see Section 4.2, Table III in the permit).

Point of Compliance

The Point of Compliance is established at the following location:

POC #	POC Location	Latitude	Longitude
1 (Conceptual)	Located next to AZPDES discharge point.	35°15'52" N	111°48'37" W

Groundwater monitoring is not required at the point of compliance (conceptual well only). The Director may amend this permit to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

IV.HYDROGEOLOGIC SETTING

Pollutant Management Area (PMA) and Discharge Impact Area (DIA) calculations were submitted with hydrologic study for increased maximum monthly flow of 165,000 gpd. Calculations for the AZPDES outfall PMA show that the increased capacity flow will reach approximately 10,550 ft. downstream in the tributary to Volunteer Wash. Particle tracking from THWELLS and ArcMap software determined that the DIA calculations (40-years of effluent

infiltration) for 165,000 gpd show an approximate maximum area of 4,800 ft. west-southwest, 4,600 ft. east-northeast, and 2,900 ft. north of the PMA. ADEQ is satisfied with PMA/DIA methodology and calculations.

Since increased maximum monthly flow to the AZPDES outfall is still below 250,000 gpd, groundwater monitoring at POC #1 is not required, except as a contingency action. There are no hydrologic changes to the permit under this amendment.

V. SURFACE WATER CONSIDERATIONS

The treatment plant is not located within a designated 100-year floodplain.

VI. COMPLIANCE SCHEDULE

The compliance schedule items are located on page 12 in the permit.

VII. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

Technical Capability

Utility Source, LLC, has demonstrated the technical competence necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A202 (B).

The permit requires that appropriate documents be sealed by an Arizona-registered geologist or professional engineer. This requirement is a part of an on-going demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

Financial Capability

Utility Source, LLC, has demonstrated the financial responsibility necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A203. The estimated dollar amount demonstrated for financial capability is \$142,040.42. The financial capability was demonstrated through a Letter of Credit per A.A.C. R18-9-A203(C)(5). The permittee is expected to maintain financial capability throughout the life of the facility.

Zoning Requirements

Flagstaff Meadows WWTP has been properly zoned for the permitted use and the permittee has complied with applicable zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201(B)(3).

VIII. ADMINISTRATIVE INFORMATION

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft permit or other significant action with respect to a permit or application. The aquifer protection program rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to ADEQ. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit.

Public Comment Period (A.A.C. R18-9-109(A))

The Department shall accept written comments from the public before a significant permit amendment is made. The written public comment period begins on the publication date of the public notice and extends for 30 calendar days. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C R18-9-109(B))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting

IX. ADDITIONAL INFORMATION

Additional information relating to this permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division - APP Unit and Reuse Unit 2
Attn: Monica Phillips
1110 W. Washington Street, Mail Code 5560D
Phoenix, Arizona 85007
Phone: (602) 771-2253